

**On the formal identity between interrogative and conditional complementizers:  
synchrony or diachrony?<sup>1</sup>**

**Sabine Iatridou (MIT) & Hedde Zeijlstra (Goettingen)**

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**Abstract:** In many languages, conditional and interrogative complementizers appear to be homophonous, like English *if* or Italian *se*. Starr (2014) argues that this is a non-accidental homophony and that conditionals and questions should therefore receive a uniform semantic analysis.

In this paper, we argue that the syntactic and semantic differences between conditionals and interrogatives show that the two should not be conflated, and that consequently this homophony cannot be explained in *synchronic* terms. However, we also argue that present in Starr's account are the seeds for a *diachronic* analysis of the morphosyntactic similarities between (embedded) questions and conditionals. Only a diachronic account can explain the non-coincidental correspondences between conditional and interrogative complementizers/constructions without simultaneously claiming that the two are semantically identical.

To this end, we show that various diachronic pathways are available for such meaning shifts: either they have a common ancestor, or they have undergone semantic spread from one

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function to another. We support this position with data from the Germanic, Romance and Slavic language families, which show that conditional and interrogative constructions are indeed diachronically related along the lines described above.

## 1. Introduction

Starr (2014) discusses the interpretation of conditionals and takes up a very interesting crosslinguistic fact which, unfortunately, has not received much attention in the semantic literature, namely the fact that in many languages, the conditional complementizer (say, conditional *if*, *if*<sub>COND</sub> henceforth) is the same lexical item as the complementizer for polar interrogatives (say, interrogative *if*, *if*<sub>INT</sub> henceforth). The sentences in (1)-(3) provide examples of the homophony in question.

- (1) a. I wonder **if** Miranda is tall (or not)  
b. **If** Miranda is smart, she will solve the problem
- (2) a. Ajo pyeti **nese** Miranda eshte e zgjuar Albanian  
She asked if Miranda is AGR.FEM smart (Bujar Rushiti, p.c.)  
'She asked if Miranda is smart'  
b. **Nese** Miranda eshte e zgjuar, do ta zgjidhi problemin.  
If Miranda is AGR.FEM smart, will SUBJ-CL.ACC solve problem-the.ACC  
'If Miranda is smart, she will solve the problem'

- (3) a. Ha chiesto **se** Miranda è furba Italian  
 Has asked if Miranda is smart  
 ‘She asked if Miranda is smart
- b. **Se** Miranda è furba risolverà il problema  
 If Miranda is smart, will.solve the problem  
 ‘If Miranda is smart, she will solve the problem’

This phenomenon has been described in non-Indo-European as well. According to Haiman 1978, Hua, a Papuan language, displays such an instance of homophony. *Esi-ve* (lit.: come-3SG.FUT.INT) can mean both ‘If he comes’ and ‘Will he come?’ (Haiman 1978).

With the exception of Starr’s proposal, theories proposed for the semantics of questions are very different from those proposed for conditionals. In a nutshell, by uttering a polar question  $p$ , the speaker asks which of the two alternatives,  $p$  or  $\neg p$ , is true (Hamblin 1958). That is, when the speaker utters (4)a, they ask the hearer to choose which of the two alternatives in (4)b is true.

- (4) a. Is Miranda smart?
- b. {Miranda is smart, Miranda is not smart}

On the other hand, a conditional like (1)b, does not ask anything, but rather asserts that the worlds in which Miranda is smart are a subset of the worlds where she will solve the problem. In short, the semantics of conditionals and the semantics of questions are quite far apart.

Against this, rather common, position in the literature, Starr claims that the crosslinguistic distribution of the aforementioned homophony is too stable to be accidental and proposes a theory in which it is not. Specifically, and in a simplified nutshell for now, he assumes that  $if_{COND}$  is basically  $if_{INT}$  and that the semantics of a conditional always contains the semantics of a polar interrogative. In other words, a sentence like (5)a basically is (5)b, in which the polar question is adjoined to a matrix clause (note the presence of  $If_{INT}$  in (5)b), which becomes the conditional consequent:

- (5) a. If it rains we will go to the movies  
b.  $If_{INT}$  it rains, we will go to the movies

We should emphasize that in addition to the issue of the lexical homophony of  $if_{COND}$  and  $if_{INT}$ , there is a structural parallelism between conditionals and interrogatives as well (which Starr briefly mentions on his page 4 and his footnote 12). In many languages, polar questions require subject-verb inversion, or V-to-T-to-C movement, as exemplified in (6):

- (6) Is Miranda smart?

But subject-verb inversion can also be cross-linguistically attested in conditional antecedents, again as the result of V-to-T-to-C movement (den Besten 1986, 1989). In Modern English, this is possible only in counterfactual<sup>2</sup> conditionals (7) but in other languages, for instance Dutch (as well

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<sup>2</sup> Or in conditionals with „X-marking“, in the terms of von Stechow & Iatridou 2020.

as earlier stages of English), subject-verb inversion can also be found in non-counterfactual conditionals (8).

- (7) a. If she had known you were sick, she would have visited you  
b. Had she known you were sick, she would have visited you  
c. \*Is he singing, he must be feeling better  
(cf. *If he is singing, he must be feeling better*)

- (8) Houd je van vlees, braad je in Croma<sup>3</sup> Dutch  
Love you of meat, bake you in Croma  
'If you love meat, you use Croma to bake'

Hence, a second important morphosyntactic similarity between conditional antecedents and polar questions emerges: both can appear with subject-verb inversion.

These two similarities together (the lexical one and the structural one) show that the morpho-syntactic shapes that conditionals can take in English and other languages are very close to the morphosyntactic shapes of (embedded and non-embedded) polar questions. We agree with Starr that these striking morpho-syntactic correspondences call for an explanation. But is the answer to build the semantics of conditionals based on the semantics of questions, as Starr does?

In this paper, we evaluate (certain aspects of) Starr's proposal and ask the following two questions: (i) How solid is the conclusion that the semantics of a conditional contains the semantics

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<sup>3</sup> It is the subject-verb inversion in the antecedent that is of interest here. Subject-verb inversion in the consequent is the result of Dutch being a Verb Second language, with the conditional antecedent being the first constituent (though see Reis & Woellstein (2010) for a somewhat different analysis for V1-conditionals in German.

of a question? And (ii) is there a way to understand the homophony between  $if_{COND}$  and  $if_{INT}$  as not accidental, but at the same time not as forcing us to the conclusion that the semantics of conditionals contains the semantics of questions? While Starr discusses a few other issues in his paper, we will only address these two questions.

## 2. A synchronic approach

To account for the aforementioned homophony between complementizers, Starr proposes that questions and conditionals should receive a unified semantics, in the sense that the meaning of conditionals can be built from that of questions. In his own words: „My proposal to treat *if* as a polar interrogative operator amounts to saying that it does what *?* does, which involves partitioning the contextual possibilities.”

According to Starr, a conditional *if p, q* gives rise to the following interpretational procedure:

(9) Raise the Yes/No question “p?” ( $\{p, \neg p\}$ )

Take the positive answer as a highlight (so “suppose p”)

Then p should entail q

In other words, conditionals are like questions which trigger a “suppose yes” answer. The exact way this is proposed to work is illustrated in (10).

(10) *If it rains you should get an umbrella*

- Step I. Take the meaning of *does it rain?*: {it rains, it doesn't rain}.
- Step II. Highlight the positive answer: {it rains, it doesn't rain}.
- Step III. Entertain updating the positive answer *it rains* to the context.
- Step IV. Conclude that updating *it rains* to the context entails also updating the context with *you should get an umbrella*.

To start out, the reader will identify steps III and IV as moves particular to conditionals. This means that Starr's proposal of including the semantics of questions in the derivation of conditionals, boils down to Steps I and II. So the 'question' part of conditional semantics consists of introducing both  $p$  and  $\neg p$  worlds and then subsequently, removing the  $\neg p$  worlds via highlighting (i.e. making one of the alternatives more salient, which makes that alternative capable of serving as an antecedent for subsequent anaphora, see Roelofsen and Farkas 2015). It is crucial here to emphasize, though, that the inclusion of highlighting in (10) is by no means evidence *in favour* of the position that conditional semantics is derived from interrogatives. It is merely a (possibly) necessary step *after* one has decided to include interrogative semantics as part of conditional semantics. Let's spell this out a bit more. The common alternative approach to the interpretation of conditionals, wherein *If it rains* takes us directly (i.e. without going through question semantics first) to the worlds in which it rains, does not require highlighting, as the only worlds introduced are the  $p$  worlds, and not the  $\neg p$  worlds in addition. On the other hand, Starr's proposal introduces both  $p$  and  $\neg p$  worlds, only to get rid of the  $\neg p$  worlds via highlighting later on. Nothing else remains of the question semantics in the end. In other words, this is not an argument *in favour* of reducing conditionals semantics to interrogative semantics but the realization that if we were forced to start out a conditional with question semantics and therefore

a partition into  $p$  and  $\neg p$  worlds, then highlighting the  $p$  worlds would be a way of getting rid of the  $\neg p$  worlds, i.e. a way to undo what the partition resulting from the question semantics brought in.

It should be noted, in addition, that if highlighting is what is needed, there are other environments that bring in highlighting. As Starr himself points out (p.16), citing Roberts (1989) and Stone (1999), modals like *might* also are capable of highlighting, so there is no reason why we would need an *interrogative if*-clause just for highlighting purposes (i.e. to take us indirectly to the  $p$ -worlds) and not a *conditional* one. As Starr puts it on page 16: “Recall that ‘highlighting’ is really just making possibilities available for anaphora.”<sup>4</sup>

Beyond the issues raised above, introducing interrogative semantics into the composition of conditionals raises a number of challenges because, despite the homonymy between interrogative and conditional complementizers, there are also various differences between conditionals and interrogatives that would need to be explained under Starr’s approach.

One set of challenges concerns cases where the behaviour of a conditional clause deviates from that of an interrogative. One place where conditional antecedents diverge from interrogatives concerns the fact that conditional antecedents may both precede or follow their antecedent. However, interrogatives must always precede their answers and can never follow the corresponding questions in a natural dialogue. This means that, as by (10), the interrogative must come first, then the positive answer is highlighted, then the hypothetical positive answer is updated to the context, and finally, the hypothetical update entails the consequent. It is unclear how (10)

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<sup>4</sup> Even though this is not relevant for our narrative, it is actually unclear to us whether Starr takes highlighting to be a property of polar interrogatives as such or a property of a particular interrogative complementizer. On p. 6, after discussing the differences between *if* and *whether*, he says “This evidence suggests that *if* highlights its positive answer just like the interrogative operator in root polar interrogatives”, on the other hand, *whether* does not do this.

would work if the consequent comes first:<sup>5</sup>

- (11) a. You should get an umbrella if it rains  
b. Person A: You should get an umbrella.  
Person B: Does it rain?

Another difference between interrogatives and conditionals has to do with the possibility for highlighting. Indeed, the default continuation of a polar question is on the positive answer, as in (10), but that is not necessary. Grammatical markers (e.g. *neither*, *not even*) can force a highlight on the negative answers in (12) and (13). And pragmatics can also highlight the negative answer too (14).

(12) Do you want Covid to spread? Neither do we. So, be careful and wear your mask

(13) A: Are there any potatoes left? (asked of a grocer)

B: There isn't even a rotten one left

(14) Do you want to die of a heart attack before you are 40? Then eat right and exercise daily

However, this is not possible in conditionals:

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<sup>5</sup> Starr claims on page 7 that for him the two clauses of a conditional do not count as sequences of discourse. He proposes that “natural languages contain a rule of composition for interpreting interrogative clauses (the antecedent) adjoined to matrix clauses (the consequent). The rule says that for each proposition highlighted by the antecedent, the consequent follows from a hypothetical addition of that proposition to the contextual information” (P. 7). However, given that the highlight must be introduced by a question before it can be reasoned upon, his analysis must nevertheless allude to some sort of discourse sequences; otherwise a pair of a polar question and its highlighted answer cannot be identical to the semantic structure of a conditional. In other words, if the semantic contribution of the antecedent of a conditional functions truly differently from that of a polar question, the two are no longer the same. Later on (P. 18) Starr says that the internal composition of conditionals should actually have parallels with the moves of a discourse, though.

- (15) \*If you want Covid to spread, neither do we.<sup>6</sup> (cf. *If you don't want covid to spread, neither do we*)
- (16) #If you want to die of a heart attack before you are 40, then eat right and exercise daily
- (17) #If there any potatoes left, there isn't even a rotten one left

In other words, even if Starr is right that conditionals include partitioning followed by highlighting, the highlighting in conditionals does not behave like that in questions.

But this is not the only difference between interrogatives and conditionals that would be hard to explain if Starr were right about the derivation in (10). Conditional antecedents can be focused by *only* (18) or *even* (19), but polar questions cannot ((20)-(21)):

- (18) Only if it rains will we go to the movies
- (19) Even if it rains, we will go to the park
- (20) \*Only does it rain?
- (21) \*Even does it rain?

So if (18)-(19) are to be derived along the lines of (10), it is difficult to imagine what the input would be.<sup>7</sup>

Furthermore, conditional antecedents can be fragment answers. Under Starr's account, B

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<sup>6</sup> The following shows that VP ellipsis is in principle licensed in conditionals, so the ungrammaticality of (15) cannot reduce to the impossibility of VP ellipsis:

i. If you don't want to go to the party, neither do I.

<sup>7</sup> Unless one were to claim that *only* and *even* are inserted in the derivation after *If it rains we will go to the movies* and *If it rains we will go to the park* have been turned into a conditional. But it is unclear to us what grammatical mechanism might permit such late insertion.

answers A's question with a question (22). As (23) shows, it is certainly possible to answer a question with a question

(22) A: Under what conditions will you give me your piano?

B: If you give me a million dollars<sup>8</sup>

(23) A: How can one get to NYC from here?

B: Why do you want to know?

B': Do you want the scenic route or the fastest way?

The difference here is that unlike the answers in (23), (22) provides a complete answer to the question.

Another challenge for taking antecedents of conditionals to be interrogatives is that under Starr's approach any polar interrogative complementizer in an adjoined position should always be able to form conditionals by its very meaning (i.e. by its ability to partition the words into  $p$  and not  $\neg p$ ). However, this is not the case. While there are many languages where the complementizer homophony under discussion occurs, there are also many languages where the interrogative and conditional complementizers are not the same. For example, the Dutch polar interrogative complementizer *of* cannot function as a conditional complementizer, though it should be able to, by Starr's account:<sup>9</sup>

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<sup>8</sup> Moreover, if one assumes that a fragment answer like the one in (22B), is the result of a full sentence to which a deletion process has applied (*If you give me a million dollars I will give you my piano*), one would still be providing the answer to the original question by providing the answer in the form of a question.

<sup>9</sup> Starr acknowledges the fact that not all languages use the same form for embedded interrogative and conditional complementizers. In his words (P.3): "Whatever the abstract semantic structure of conditionals is, it must be flexible enough to frame an answer to this question and hence must not be what existing theories take it to be. Accordingly, languages which do not use the same particle in conditionals and embedded interrogatives do not count as counterexamples to the conditional-interrogative link." However, the concrete account for conditionals that Starr (2010) presents does predict that in languages like Dutch an embedded polar question in an adjunct position should

- (24) a. Zij vraagt of hij ziek is Dutch  
 She asks if/whether he ill is  
 ‘She asks of he is ill’
- b. \*Of hij ziek is, moet hij thuis blijven  
 If/whether ill is, must he home stay  
 Int: ‘If he is ill, he must stay at home’

Of course, it may be the case that the absence of examples like (24)b is due to some blocking by the more specific form *als*, which is restricted to conditional usages, as in (25).

- (25) Als hij ziek is, moet hij thuis blijven  
 ‘If he is ill, he must stay at home’

But that means that Dutch *als* requires a lexical semantics that is specific to conditionals and thus not like English *if*, which is interrogative in nature. However, if that is the case, it means that despite superficial resemblances, the semantic derivation of the Dutch sentence (25) must be different from its English translation, the meaning of which is derived via the semantics of questions.<sup>10</sup> Moreover, this means that even if we have a conditional semantics based on interrogatives, cases like Dutch *als* would show us that we would still need a semantics for

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give rise to a conditional interpretation, simply by its very semantics. On the other hand, our diachronic approach, which we will defend in Section 3 can capture exactly why some languages do not have this homonymy. It is in the nature of diachronic change to happen in some languages and not others.

<sup>10</sup> Note that one cannot allude to the different forms in terms of allomorphy (where *als* is the morphological exponent in particular contexts); under Starr’s approach, there would be nothing conditional-specific in the syntax of (25) that could license such allomorphy.

conditionals (and conditional complementizers) that is not interrogative-based. This latter point can be made at a larger scale as well, as we will see next.

Conditional meanings can be introduced by various means besides *if*-clauses. The following, non-exhaustive list of examples shows that there is a variety of other ways to yield a conditional interpretation

- (26)
- a. To kiss under the bridge would be wonderful
  - b. With this knife I would have been able to cut it
  - c. She looks at him and he shies away in fear
  - d. Ignore your homework and you will fail
  - e. Cover your pipes or they will freeze

Note that nothing in the examples in (26) suggests the presence of an underlying polar question operator. But that means that by reducing conditional antecedents with *if* to interrogatives, the need for a non-interrogative-based conditional semantics has not disappeared. And if a non-interrogative-based conditional semantics is needed anyway to account for examples like (26), it is unclear why an interrogative-based one would be needed in addition<sup>11</sup>.

Another challenge for Starr's analysis involves counterfactual conditionals. The reason is that the morphosyntax of a counterfactual antecedent does not correspond to a grammatical question or a question with the appropriate meaning:

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<sup>11</sup> Starr actually makes this point himself on page 3: „the goal is not to give an analysis on which an interrogative component is necessary for the formation of a conditional meaning. That analysis is undercut even by English: conditional meanings can be communicated with non-interrogative connectives like *provided that* and *unless*. The goal is a semantic theory which is flexible enough to make an interrogative component *possible*“. In other words, the interrogative semantics does not simplify the overall ontology of mechanisms that create conditional meanings, rather it adds to it, and brings along the challenges discussed in this section.

- (27) a. If he knew the answer right now, he would tell us  
 b. #Did he know the answer right now?
- (28) a. If she left tomorrow, she would get there next week  
 b. #Did she leave tomorrow?
- (29) a. If Fred had left tomorrow, he would have had a more pleasant journey  
 b. #Had Fred left tomorrow?
- (30) a. If he had read the book yesterday, ...  
 b. Had he read the book yesterday?<sup>12</sup>

So given that *if* is also used in counterfactual conditionals, it is not clear to us how the account of adjoining the *if*-clause as a highlighted question to the matrix can be extended, given that the corresponding polar question is either ungrammatical or has a different meaning.

Finally, there is also the type of conditional referred in Iatridou (1991) as “factual”, where the content of the *if*-clause is taken either as a fact, or as discourse-old:

- (31) A: Someone just knocked on the door  
 B: Well, if someone knocked on the door, go open it! What are you standing there for?
- (32) Miranda was at the party, and if Miranda was at the party, Malick will have been there as well. These two always come and go together.

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<sup>12</sup> Note that (29)a is grammatical but it asks if he had read the book *by* yesterday. On the other hand, (29)b talks about the book having been read *in* yesterday.

It is unclear to us, under what conditions the corresponding polar questions of the if-clauses in (31)-(32) could be felicitously uttered, given that their content was just asserted. For instance, in the context of (32) it would be infelicitous to ask if someone knocked on the door, given that it was just asserted.

Summarizing, we see that there are several behavioral differences between conditional if-clauses and polar interrogatives that cannot be readily explained under Starr's account of reducing the former to the latter. Moreover, as we said earlier, other than the homophony in question, there

is no other reason to assume that conditional if-clauses start out their lives as polar questions adjoined to the matrix.<sup>13, 14, 15</sup>

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<sup>13</sup> Starr argues that his proposal for seeing conditional if-clauses as highlighted interrogative clauses also extends to relevance conditionals. He (probably correctly) assumes that this would have to mean that relevance conditionals should have the same syntax as hypothetical conditionals, which he thinks they do. However, there appear to be important differences (though this does not affect his main argument in favor of a reduction of If<sub>COND</sub> to if<sub>INT</sub>):

In V2 languages, like Dutch, a hypothetical if-clause must be followed directly by the verb, as the if-clause is the first constituent (i)-(ii), but a relevance conditional allows material in between the two, so-called *V3 effects* (iii)-(iv).

(i) Als het regent, gaan we naar de bioscoop Dutch

If it rains, go we the cinema

‘If it rains, we go the cinema’

(ii) \*Als het regent, we gaan naar de bioscoop

If it rains, go we the cinema

(iii) Als je dorst hebt, is er bier in de koelkast

If you thirst have, is there beer in the fridge

‘If you’re thirsty, there’s beer in the fridge’

(iv) Als je dorst hebt, er is bier in de koelkast

If you thirst have, there is beer in the fridge

‘If you’re thirsty, there’s beer in the fridge’

Further, while a hypothetical if-clause can contain subject-verb inversion, the relevance if-clause cannot:

(v) Regent het, dan gaan we naar de bioscoop Dutch

Rains it, then go we to the cinema

‘If it rains, then we go the cinema’

(vi) \*Heb je dorst, er is bier in de koelkast

Have you thirst, there is beer in the fridge

Hypothetical if-clauses can contain bound variables (vii)-(viii), irrespective of the order of the antecedent and the consequent of the conditional, but relevance if-clauses do not (ix)-(x):

(vii) Every boy<sub>i</sub> takes aspirin if he<sub>vj</sub> is sick

(viii) If he<sub>vj</sub> is sick, every boy<sub>i</sub> takes aspirin

(ix) Every boy<sub>i</sub> is hard at work, if his<sub>j/\*i</sub> mother asks

(x) If his<sub>j/i</sub> mother asks, every boy<sub>i</sub> is hard at work

Finally, hypothetical if-clauses can be focused (xi)-(xii), but relevance if-clauses cannot (xiii)-(xiv):

(xi) It is if it rains that we will go to the park

(xii) Only if it rains, will we go to the park

(xiii) \*It is if you are thirsty that there is beer in the fridge

(xiv) \*Only if you are thirsty is there beer in the fridge

<sup>14</sup>Starr (p.3) also claims that conditionals and topics are alike and that this fits his view that conditional antecedents are interrogatives “because one way of making a proposition a topic is by making it an answer to a question under discussion”. We are confused about the terminology here, as the term reserved for answers to questions is ‘focus’, and not ‘topic’. Moreover, the argument that conditionals are like topics is not that straightforward. For sure they can be, but need not be. In this context, Haiman (1978) is often cited (including by Starr). One of the main languages that Haiman discusses is Turkish and he relies a big part of his argument on the fact that the conditional affix *sA* is homophonous with the marker for (contrastive) topic *-sA*. However, there are many differences between the two, as shown in Iatridou (2013). Among several differences, a conditional antecedent can be an answer to a question (like for example (23)). On the other hand, contrastive topic *-sA* is not possible on an answer, since contrastive topics cannot be focused:

(i) A: Kim-i iş-e al-dı-n?  
who-acc. work-dat. take-past-2.sg.  
‘Who did you hire?’

B: \*Ali-yi-yse.  
Ali-acc.-sA.  
‘Ali’

### 3. A diachronic approach

As discussed above, a number of problems emerge for Starr's analysis of the observed homophony between conditional and interrogative complementizers.

At the same time, the cross-linguistic manifestation of the lexical and structural homophony

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On the other hand, conditional -sA is still obligatory in an answer:

- (ii) A: Hangi şart-lar alt-in-da ban-a piyano-n-u sat-ar-sın?  
what condition-pl. under-3.sg.-loc. I -dat. piano-2.sg.-acc. sell-aor.-2.sg.  
'Under which conditions will you sell me your piano?'
- B: Ban-a bir milyon lira ver-ir-se-n I-dat.  
one million lira give-aor.-cond.-2.sg.  
'if you give me a million liras'

<sup>15</sup> Starr claims that conditionals with multiple if-clauses form an argument in favor of his highlighting account, against the restrictor and other theories. The reader is referred to Starr's Section 3.1 for details. In short, he compares conditional antecedents with CP-coordination (if p and if q, then r) with antecedents with IP-coordination (if p and q, then r). He argues that in the former, r follows from p and r follows from q. By contrast, *if p and q, then r* will say that r follows from p and q:

- (i) If the die comes up 2 and if the die comes up 3, Ben will win.  
(ii) #If the die comes up 2 and the die comes up 3, Ben will win.

The meanings of (i) and (ii) differ: (i) means that if the die comes up 2, Ben will win, and if the die comes up 3, Ben will win as well. (ii) has a 'unioned' reading (Starr's term), where Ben will win only if the die comes up 2 and 3 at the same time, which is impossible. Starr claims that this is due to there being two highlights in (i), and only one in (ii). Starr also correctly points out, that (iii)-(v) do not directly follow from his approach:

- (iii) If Laura breaks up with Bobby and if she then runs away with James, she might be more happy  
(iv) If Cooper follows every lead and if each of them is a dead end, then the case cannot be solved.  
(v) If Duke Taryn has a daughter and if Duke Basilisk has a son, then they will be married

Despite the CP-coordination, in (iii)-(v), r follows from p and q, there is a unioned reading. Starr rushes to add that these are not counterexamples to his proposal, as (iii)-(v) fall outside the scope of his semantics: they require mechanisms of modal anaphora and they also show that if two highlighted propositions are compatible they are conjoined into a single highlighted proposition.

We would like to point out that there is no reason to consider (iii)-(v) different from (i). Bjorkman (2013) shows that in general with IP-coordination, a strong relationship (such as causal or temporal one) is necessarily imposed (which we will equate with Starr's unioning), whereas with CP-coordination nothing is imposed. (vi), an instance of IP-coordination (there is no second complementizer *that*) conveys that the election of the new government and the riot are causally related. By contrast, (vii), an instance of CP-coordination (there is a second complementizer *that*), does not convey such a causal relation, though does not exclude it either.

- (vi) The newspaper reported that a new government was elected and there was a riot

- (vii) The newspaper reported that a new government was elected and that there was a riot

With TP-coordination in conditionals, unioning is thus obligatory, as is the case in (ii). With CP-coordination unioning is possible but not necessary. This accounts for (i) and (iii)-(v). In (i), unioning is absent (the unioned reading is impossible); in (iii)-(v), a unioned reading is enforced due to the anaphoric behavior of 'then' (iii), 'each of them' (iv) and 'they' (v). Hence, the relevant differences between the various examples all follow from more generally observed properties of the difference between CP- and TP-coordination, and are not particular to *if*-clauses or highlighting.

between (embedded) polar questions and conditionals is too strong to be accidental. We argue that this paradox can be resolved by bringing in a diachronic perspective. Under a diachronic perspective, the observed homophony receives a natural explanation given that overlaps in the usage conditions of two elements with different semantics can result in a meaning change of one element into the other (Jespersen 1940, Heine, Claudi, & Hünnemeyer 1991, Hopper & Traugott 1993, Eckardt 2006, Traugott 2007). The fact that in certain conditions, both questions and conditional clauses can be used may result in processes of lexical change where an interrogative clause might be reanalysed as a conditional clause or the other way round (See Jespersen 1940 for an early proposal for such a change). An interrogative complementizer can then develop into a conditional complementizer or vice versa.

Naturally, an explanation for the constructional and/or lexical homophony between conditionals and interrogatives in diachronic terms as a first step requires sketches of plausible scenarios of change that lead to the attested cases of homophony. Given the space of possibilities for a historical origin of both the attested lexical and constructional homophony, two types of scenarios suggest themselves: (i) semantic spread; and (ii) descent from a common ancestor. Let's explicate each of these processes in turn.

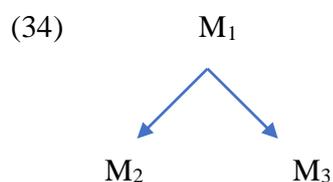
Under semantic spread scenarios, particular elements or constructions that are initially only used for one function, over time get grammaticalized into a second function as well (see von der Gabelentz 1891 for the first characterization of such semantic reanalysis phenomena; see also Roberts & Roussou 2003, Hopper & Traugott 2003 for more recent discussion). Schematically, this is depicted in (33) below.

(33)  $M_1 \longrightarrow M_1+M_2$

An example is the development of causal *since* in English. Originally, English *since* was only used temporally, but around the 16<sup>th</sup> century we find that it was used causally as well (Oxford English Dictionary). The reason for this change is that often temporal and causal relations coincide. In a sentence like *I've stayed inside since it got rainy since* lends itself to both a temporal and a causal interpretation. Once causal *since* emerged in English in the 16<sup>th</sup> century, we can say that *since* underwent semantic spread from one meaning to two.<sup>16</sup> A similar example concerns English *while*, which developed from having only a temporal interpretation into being ambiguous between a temporal and a concessive one (Traugott 1982).

In our case, a scenario involving semantic spread could be one where an interrogative complementizer would grammaticalize/spread to a conditional complementizer. Another case would be a scenario where a conditional complementizer would grammaticalize/spread into an interrogative complementizer.

In addition to the process of semantic spread, a common ancestor scenario can also produce a homophony like the one we are discussing. Under a common ancestor scenario, two particular elements or constructions have a common ancestor. This is illustrated in (34):



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<sup>16</sup> Note that the two *sinces* are indeed different lexical items. Temporal *since* requires the main clause to be in the perfect, whereas causal *since* lacks such a requirement. *Since it got rainy, I've stayed inside* is ambiguous between a temporal and a clausal reading; *Since it got rainy, I stayed inside* only has a causal interpretation.

Here, a conditional complementizer and an embedded interrogative complementizer may both have developed from another element, for instance, a main clause interrogative particle. After the two changes, the original function may get lost. The French counterparts of English *since*, French *depuis* (temporal *since*) and *puisque* (causal *since*) reflect such a pattern (Fagard 2007). Both stem from Vulgar Latin *pōstea* (later), which has not disappeared from the language, but can now only be used with the meaning (*and*) *next*. Another example is English *may*, which originally was an ability modal (meaning ‘have the ability/power’) and which developed into both a deontic and an epistemic modal and lost the ability reading (Heine, Claudi, & Hünemeyer 1991).<sup>17</sup> Also, English *know* and *can* derived from the same root old English *cunnan* that meant ‘to have the mental or intellectual capability to’ (Lightfoot 1979).

For both types of scenarios, the question arises as to how and why such changes happen at all. Generally, a meaning change from  $M_1$  to  $M_2$  as in (33) can only take place if some string of input text containing  $M_1$  in certain conditions is pragmatically equivalent to a string of input text containing  $M_2$ . Then, learners may decide to reanalyse  $M_1$  as  $M_2$ . The same holds, of course, for the change from  $M_1$  to  $M_2/M_3$  in (34). Even though semantically conditionals and interrogatives are different when their usage conditions are similar, they lend themselves to such instances of syntactic/semantic reanalysis and change. As we will see, this is indeed what appears to have happened.

Strikingly, it turns out that all sketched scenarios are indeed attested when it comes to the observed homophony between conditionals and interrogatives. In 3.1, we discuss cases in

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<sup>17</sup> Again, arguably deontic and epistemic *may* are different lexical items, as they display different scopal behavior with respect to negation. Deontic *may* generally scopes below negation (*You may not leave* under neutral intonation means that you are not allowed to leave), whereas epistemic *may* generally scopes above negation (*She may not be leaving* means that it is possible that she is not leaving). Those facts are hard to understand if the two are underlyingly the same (Iatridou & Zeijlstra 2013).

Germanic languages where a polar construction (i.e., a main clause question) spreads into a conditional construction (a V1-conditional). In 3.2, we discuss the mirror image of this type of semantic change, namely cases in Romance where a conditional complementizer spreads into an embedded interrogative complementizer. 3.3, in turn, shows examples from Slavic languages involving a common ancestor. There, a main clause polar question particle changed into both a conditional and an embedded interrogative complementizer before its original usage as main clause polar question particle disappeared in the course of time.

### *3.1 Semantic spread from interrogatives into V1 antecedents*

We are not the first to suggest that diachronic explanations may be behind the constructional similarities between (embedded) polar questions and conditionals. One such approach has already been proposed by Jespersen (1940) and has been further pursued by Van den Nest (2010) in an in-depth investigation of the behaviour of V1-conditionals in Old English and Present Day English, and Old High German and Present Day German.<sup>18</sup> In short, Jespersen and Van der Nest conjecture that V1-antecedents came into being as a result of independent polar questions having been reanalysed as conditional adjuncts, a process that especially for German can be traced back in the available data (for English the change had already been mostly completed before the earliest sources).

As we saw before, an independent polar question may lend itself to a grammaticalization

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<sup>18</sup> Instances of 'V1' antecedents or 'Verb First' antecedents were already discussed in Section 1. Example (7b) is repeated below:

(i) Had she known you were sick, she would have visited you

The name 'V1 antecedents' refers to the fact that inside the antecedent, the verb is in first position, a word order permutation achieved by the verb moving to the position in which the complementizer would have appeared (den Besten 1986/1989).

process in a fairly straightforward way. The question in (35) can easily be followed by (36).

(35) Is it raining?

(36) You will need an umbrella

As shown in Section 2, the reason why such a continuation is possible is that matrix polar questions easily trigger a default *yes*-implication for continuations. This way, the sequence in (35)-(36) can also be reanalysed as (37), where  $C_{COND}$  is the original interrogative C-head that is now reanalysed as a conditional head to which V-to-C movement has taken place, yielding subject-verb inversion:

(37) [<sub>CP</sub> [<sub>CP</sub>  $C_{COND}$ -is<sub>i</sub> it t<sub>i</sub> raining] (Then) [<sub>TP</sub> you need an umbrella]]

This, of course, is reminiscent of Starr's account discussed in section 2, see especially (10). However, while for Starr's account this is part of the (synchronic) semantic derivation of conditionals, for Jespersen and van den Nest this is a historical process of reanalysis. That is, for Starr, (35) is part of the semantics of (37). For the diachronic perspective, (35)-(36) do not have to be semantically identical to (37). It is, instead, the similarity of their usage conditions that makes the diachronic reanalysis possible. Since this historical explanation does not hinge on the semantic similarity between polar interrogatives and conditionals, it is also not subject to the problems which Starr's approach faces, as discussed in Section 2.

Hence, V1-antecedents can be taken as a clear case where conditional clauses historically emerge out of polar questions, without the two being syntactically and semantically identical.

The diachronic approach does not face the issues that Starr's synchronic approach faces,

but one can, of course, ask different questions of it. Here we mention three such questions, all pertaining to V1 conditionals, and then proceed to show how the diachronic approach captures the facts, and rather easily so.

The first question concerns V1 conditionals and counterfactuality. We know that in a variety of languages, V1-conditionals are restricted to counterfactuals (cf. Iatridou & Embick 1994). This does not follow from the processes sketched above. Second, V1-antecedents are more restricted than other conditionals with respect to their ability to appear in sentence-final position (Iatridou & Embick 1994). And, third, in certain languages, like English, V1 antecedents are restricted to particular predicates (*be, have, should*). All these properties should be made to follow under the diachronic approach.

As for the first question, the proposal makes a clear prediction. If V1 antecedents are grammaticalized polar questions, only non-counterfactual V1 antecedents are expected to be possible for reasons explained in the discussion of examples (27)-(30): the verbal morphology of counterfactual conditionals is such that there are no polar interrogative counterparts to counterfactual conditionals. This predicts that the emergence of V1 counterfactual antecedents must have taken place after the initial change, that is, after V1 non-counterfactual antecedents appeared. Consequently, those languages that nowadays feature only counterfactual V1 antecedents must have exhibited non-counterfactual V1 conditionals in an earlier stage: the restriction to counterfactuals must then result from a more recent innovation.

Van den Nest (2010) claims that this is indeed the case. In order to show this, Van den Nest compares V1 conditionals in Old English with V1 conditionals in Present Day English and finds that the majority of all Old English V1-conditionals (67%) in his corpus have a non-counterfactual ('realis' in his terms) interpretation, even though currently they can only be used counterfactually.

Also, German, which to date still allows non-counterfactual V1-antecedents, underwent a similar shift: In Old High German the share of counterfactual conditionals is substantially lower than in Present Day German (12% vs. 21%). This suggests indeed that the usage of counterfactual V1-conditionals is a more recent innovation. The fact that V1-antecedents in Present Day English can only be counterfactual thus does not run into difficulties under the diachronic proposal. Rather the opposite, it is supported by it, as the diachronic development of a V1-conditional can be seen as a further specialization of a particular grammatical function over time.

The second issue that a diachronic account needs to be made compatible with is the fact that V1-conditionals are more restricted than other conditionals with respect to their ability to appear in sentence-final position. Since polar questions must always precede their answers, the prediction of a grammaticalization approach is that reanalysed V1-conditionals were initially only left-adjoined to their matrix hosts.<sup>19</sup> However, given that these reanalysed V1-antecedents are currently adjuncts and no longer separate clauses, there is no inherent syntactic or semantic reason why these adjuncts must occur only left-adjoined. In that sense, it is not surprising that in certain languages, the restriction for antecedents to appear only left-adjoined has been lifted.<sup>20</sup> Again, preliminary evidence for this lifting comes from the German historical data Van den Nest provides.

Van den Nest shows that 88% of Old High German V1 conditionals appear to the left of

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<sup>19</sup> That adjuncts can be specified in their linear position with respect to their hosts is not strange; this is in fact the case for many adjuncts (cf. Koenenman & Zeijlstra 2017: ch. 9).

<sup>20</sup> Note that this does not entail that we assume that V1-conditionals and conditionals headed by a complementizer must have the exact same distribution. Iatridou and Embick 1994 show that V1 conditionals cannot be focused, and moreover, as mentioned in the main text, cannot appear in sentence-final position in many languages. Reis & Wollstein (2010) also note that V1 conditionals cannot form relevance conditionals and moreover, that V1 conditionals are better in German adversative conditionals. Axel and Wollstein (2008) and Reis & Wollstein (2010) propose that various differences between V1-conditionals and *wenn*-conditionals in German can reduce to V1-conditionals being adjoined to their consequents' CPs, while *wenn*-conditionals can be more deeply embedded. While remaining agnostic as to the exact source of these differences, we only predict that V1-conditionals and their consequent must belong to the same sentence and that V1-conditionals have a purely conditional (and not interrogative) meaning. That proposal is fully compatible with Reis & Wollstein's proposal, but does not depend on it.

the main clause and are not directly followed by the main clause but precede adverbials like *tharana* ('therein') (38) or anaphors like *so* (39), while in Present Day German only 29% does so.<sup>21</sup>

(38) Irsúachist thu thiu wúntar inti ellu wóroltaltar, erzélist thu ouh thia gúati, waz íagilicher dáti: **Tharana** maht thu irthénken, mit brúnnen thih gidrénken, gifréwen ouh thie thíne mit géistlichemo wíne.<sup>22</sup>

If you search through the wonders and aeons, if you consider the virtues that everyone has practiced, **therein** you may discover what invigorates you and your neighbours with water and refreshes you with sacred wine.

(39) Quát er ouh bi nóti thaz man sia stéinoti **so** wídorit er in wáru sines sélbes leru.<sup>23</sup>

However, if he had said that they should stone her, **then** his actions would have been in contradiction with his own teachings.

This shows that the percentage of antecedents appearing to the left of the main clause decreases over time. That further indicates that the percentage of V1-antecedents to right-attach to their main clauses increased over time and thus must be a more recent development.

Finally, we come to the fact that English V1 conditionals are restricted to particular predicates (*be, have, should*). Van den Nest shows that Old English V1-antecedents allowed a wider range of variation with respect to the predicates that appear in them. 61% of all V1-

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<sup>21</sup> Van den Nest does not provide the overall numbers of left-adjoined and right-adjoined V1-antecedents in the relevant time frames, hence we present this more indirect piece of evidence.

<sup>22</sup> Otfried, *Harmony of Gospels* II 9;21. In Van der Nest 2004: (58).

<sup>23</sup> Otfried, *Harmony of Gospels* III 17;31. In Van der Nest 2004: (57).

conditional tokens in Van den Nest's corpus of Old English involve lexical verbs, like *awacīe* ('weakens') in (40).

(40) *Awacīe se cristendom, sona scylfð se cynedom*

If Christianity weakens, then the monarchy will soon stagger

Again, this shows that the current restriction in Present Day English to *have*, *be* and *should* is indeed, a recent innovation (see Biberauer & Roberts 2017), and is not at odds with the semantic spread approached pursued earlier.

The hypothesis that V1-conditionals historically emerged from polar questions is thus in line with the linguistic facts attested, and provides a clear understanding of how interrogative constructions can be reanalysed into conditional terms. The structural homophony between polar questions and V1-conditionals can be diachronically explained, and therefore renders a synchronic explanation unnecessary and given its difficulties, undesirable.<sup>24</sup>

### **3.2 *Semantic spread from conditional complementizers into interrogative complementizers***

In section 3.1 we discussed the process in which an interrogative construction spreads into a

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<sup>24</sup> We would like to note here that in Old English, unlike Old High German, V1-conditionals always were in subjunctive mood. Arguably this is the result of the fact that the change in English took place earlier and, unlike in German, was already completed by the time of the earliest sources. Under the current proposal, the change from indicative mood to subjunctive mood should then have taken place earlier in time, after the emergence of V1-conditionals in indicative mood. An alternative view, mentioned by Van den Nest, is that these V1-conditionals could also be grammaticalized out of V1-declaratives, but he does not provide any evidence for this, and the relevant data are unfortunately no longer available. We have not identified historical data that show two declaratives can be used in circumstances where a conditional interpretation would arise, but such scenarios are of course conceivable (witness *you drink one more glass, you are fired* constructions). Since the diachronic development can be more properly traced back in German, it is safest to only draw strong conclusions on the basis of the facts observed for this language.

conditional construction. We argued that this change was facilitated by the similarity in usage conditions between polar questions and conditional clauses, as both may entertain reasoning on the basis of hypothetical answers to a question under discussion. However, if the usage conditions of interrogatives and conditionals can be similar (even though the two types of expressions are not semantically identical), one may also expect reverse scenarios where a conditional construction semantically spreads into an interrogative construction.

Such instances of semantic spread are indeed attested. One candidate for such a change would be Romance *si/se* (stemming from Latin *si*), which is homophonous between an embedded and an interrogative complementizer, illustrated for Italian below.

- (41) a. Ha chiesto se Miranda è furba Italian  
 Has asked if Miranda is smart  
 ‘She asked if Miranda is smart’
- b. Se Miranda è furba risolverà il problema  
 If Miranda is smart, will.solve the problem  
 ‘If Miranda is smart, she will solve the problem’

In Classical Latin (1<sup>st</sup> Century BC – 2<sup>nd</sup> Century AD), *si* could be used in three contexts: as a conditional complementizer (42), as an optative marker (43) and as a complementizer heading clauses embedded by verbs expressing *expectation* or *doubt* (44):

- (42) Si aes habent, dant mercem<sup>25</sup> Classical Latin

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<sup>25</sup> Plautus, *Asinaria* 200.

If money have, give goods

‘If they get the money, they give the goods.’

(43) Si angulus ille accedat<sup>26</sup>

If corner that added

‘If that corner only be added!’

(44) Iam dudum expecto si tuum officium scias<sup>27</sup>

Already long await if your job know

‘I’ve been waiting long to see if you know your job’

Whereas in Classical Latin *si* could only head an interrogative clause if it were selected by expressions meaning something like *except* or *doubt*, both in Vulgar Latin (as of the 4<sup>th</sup> Century) and in the Late Latin period (around the 10<sup>th</sup> Century), *si* could, however, be used in all kinds of embedded interrogative clauses too, as illustrated below for *rogare* (‘ask’) (cf. Stotz 1996-2004, see also Brown et al. 2009):

(45) Rogo si quid velit

Late Latin

Ask if what wants

‘I ask if he wants anything’

This change continued in all Medieval Romance languages as well, where *si/se* could be used as an interrogative complementizer (cf. Spanish and French *si*, Portuguese and Italian *se*).

Naturally, the question arises as to what exactly triggered the semantic spread from a

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<sup>26</sup> Horace, Sat. II. 6.9.

<sup>27</sup> Plautus, Poenulus 12.

conditional complementizer into a joint conditional and interrogative complementizer. The key to understanding this arguably lies in the fact that *si* could head interrogative clauses that are selected by verbs expressing expectation or doubt, which appear to be its first usages as an interrogative complementizer.

The following Latin examples can be analysed in this vein. Take for instance, (46), discussed by Bodelot (2013). While the sentence has a clear non-interrogative interpretation, as indicated by the translation in (46), it can also be understood as containing an indirect interrogative. In fact, the Loeb edition even translates it as “I had been wondering whether you would mention the subject”.<sup>28</sup>

(46) Exspectabamque, si quid de eo ad me scriberes.<sup>29</sup>

wait.ind.impf.1sg-and if something about this to me write.subj.impf.2sg

‘I was waiting, in case you would write me something’

This leads, again, to a situation where the usage conditions of a conditional and an (embedded) interrogative clause are close. As we saw before, such scenarios naturally lend themselves to semantic reanalysis. If *si* in an example like (44)/(46), where it could still be said to carry the meaning of a conditional complementizer, can be reanalysed as an interrogative complementizer as well, it opens up the way for *si* to become a natural polar interrogative complementizer, again, a regular instance of semantic spread. Hence, not only semantic spread from an interrogative into a conditional, but also semantic spread from a conditional into an interrogative is thus an option

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<sup>28</sup> Thanks to Chiara Gianollo (p.c.) for pointing this out to us.

<sup>29</sup> Cicero, Att. 16.2.4

attested across languages.<sup>30</sup>

Hence, it appears that there is not only one possible pathway from a conditional complementizer to be reanalysed as an interrogative complementizer as well, but that there are various ways where one usage can be spread into the other. This further suggests that what underlies the attested lexical homophony between conditionals and interrogatives must be diachronic in nature.

### 3.3 *Main clause interrogative particles as common ancestor for both conditional and interrogative complementizers*

Given the above, the idea that semantic spread is responsible for the attested lexical and constructional homophony between conditionals and interrogatives, is strongly corroborated. At the same time, as mentioned in the beginning of this section, semantic spread is not the only possible diachronic account for such a homophony. Another candidate is the co-called common ancestor approach. Below, we see that certain instances of this lexical homophony between interrogative and conditional complementizers are indeed the result of such a process. For this, we now discuss the homophony between Czech interrogative and conditional complementizers, though the observed patterns apply also to other Slavic languages, such as Russian or Polish.

Modern Czech has a homophonous interrogative and conditional complementizer, *jestli*, as shown below, though the interrogative complementizer is currently used more often in colloquial registers.

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<sup>30</sup> Rodriguez Molina & Enrique-Ariasafter (2018) show that after the spread from a conditional into interrogative complementizer had taken place, *si/se* could also be employed as a main clause polar question particle in Old Spanish, Old French and Old Occitan. This process has also been observed in a few other languages, e.g., for Hebrew *im*, Greek *ei*, and Yiddish (see Jacobs et. al. 1994).

- (47) a. Ptala se, jestli Marie přijela Czech  
 Asked.sg.f refl if Mary arrived.sg.f  
 ‘She asked if Mary arrived.’
- b. Jestli Marie zůstane, odjedu  
 If Mary stay.3SG go.3SG  
 ‘If Mary stays, I’ll go.’

Historically, *jestli* stems from a Proto-Slavic polar particle *-li* and copular construction *jest* $\bar{b}$ , ‘it is’ (Vasmer 1953-1958). The polar particle *-li* was used to create main clause polar questions, which it could still do in Old Czech:

- (48) Hosti, chceš-li vrci krychle?<sup>31</sup>  
 guest want-li play dice  
 ‘Hey, guest, do you want to play dice?’

Normally, *-li* was used as the sole particle to create polar questions, but cases have been attested where also *jestli*, either unsplit or split into *jest* and *-li*, formed polar questions, as the following examples from 14<sup>th</sup> Century Czech show:

- (49) Jestli podobno dani dáti ciesařovi?<sup>32</sup>  
 Be.3sg-li appropriate tax give to-Caesar

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<sup>31</sup> Example from *Šatira o ševcích - Hradecký rukopis* (end of 14<sup>th</sup> Century).

<sup>32</sup> Example from *Život Krista Pána, [rukopis C]* (end of 14<sup>th</sup> Century).

‘Is it appropriate to give taxes to Caesar?’

(50) I v tom-li jest tvá nádeje<sup>33</sup>

And in that-li BE.3sg your hope

‘And in that is your hope?’

According to Bauer 1960, Old Czech *jestli* could be used to introduce subordinate questions but not matrix ones and moreover, it was not used in conditionals (see also Svoboda 1962).

These facts suggest that the current Czech homophony cannot be the result of just semantic spread. First, there is no clear diachronic pathway from *embedded* interrogatives clauses into conditional clauses (only from main clause interrogatives into conditional clauses). Second, a pathway from conditional clauses into interrogatives is diachronically impossible in this case, given that interrogative *jestli* is older than conditional *jestli*.

The observed facts can be naturally explained by assuming that the original source for both *jestli* heading conditional clauses and heading embedded interrogative clauses is matrix interrogative particle (*jest-)*li. In that case, two separate semantic reanalyses must have taken place: one where matrix interrogative clauses were reanalysed as embedded interrogative clauses – under such a reanalysis (*jest-)*li must have spread from a main clause polar question particle into an interrogative complementizer; and one where polar questions were reanalysed as conditional clauses and where (*jest-)*li must have spread into a conditional complementizer.

Both types of reanalysis are very natural. The first one is the well-known change where two subsequent main clauses are reanalysed as a combination of a main clause and an embedded clause, a so-called change from parataxis into hypotaxis, which has been attested in many

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<sup>33</sup> Example from Example from *Podkoní a žák* (1409).

languages (see again Traugott 1985, Kiparksy 1995, Hopper & Traugott 1993; see also Roberts & Roussou 2003). Here a main clause interrogative becomes an embedded interrogative (like *I want to know. Is he ill? -> I want to know (if) he is ill*), a change that took place between the Proto-Slavic and Old Czech period. The second one, is the change from polar questions into conditional clauses, which we already saw in English and other Germanic languages (and which was already identified by Jespersen). Hence, under this scenario, the attested lexical homophony in contemporary Czech receives a natural explanation. Of course, a final step in the account should involve the disappearance of *jestli* as a main clause polar particle. But given that this change occurred much later, after the emergence of both embedded interrogative and conditional *jestli*, whatever the cause of this change was, is ultimately immaterial to our analysis.

To sum up, apart from semantic spread having applied in both directions, a third type of change, where both the interrogative and the conditional complementizer have emerged out of a common ancestor can be identified as well. The fact that different types of diachronic semantic processes may all lead to the existing homophony between conditionals and interrogatives, furthermore illustrates that there is no need for Starr's semantics in which conditional if-clauses are synchronically derived from polar interrogatives, and all the challenges that it faces.

#### **4. Conclusions**

In this paper, we have discussed the non-coincidental homophony between conditional and interrogative complementizers, such as English *if* or Italian *si*, or between conditional and interrogative constructions, such as V1-conditionals/questions. Contra Starr (2014), we have argued that the syntactic and semantic differences between conditionals and interrogatives show

that the two should not be conflated. Hence, this homophony cannot be explained in synchronic terms. Only a diachronic account can explain the non-coincidental correspondences between conditional and interrogative complementizers/clauses without simultaneously claiming that the two are semantically identical.

In short, we propose that conditional and interrogative complementizers/clauses are synchronically different, but diachronically related, given that the close (but-not-identical) usage conditions of polar interrogatives and conditionals make them very suitable for such a reanalysis. The fact that there are even multiple types of diachronic pathways available for such meaning shifts further strengthens such a diachronic perspective: either, they have a common ancestor, namely a matrix question interrogative particle, or they have undergone semantic spread from one function in the other. We have supported this position with data from the Germanic, Romance and Slavic language families, that show that conditional and interrogative constructions are indeed diachronically related, and that languages indeed vary with respect to the type of diachronic pathway underlying it.

## References

- Axel, K. & A. Wöllstein 2008. 'German verb-first conditionals as unintegrated clauses. A case study in converging synchronic and diachronic evidence.' In: S. Winkler & S. Featherston (eds.), *The Fruits of Empirical Linguistics II*. Berlin, New York: Mouton de Gruyter. 1-37.
- Bauer, J. 1960. *Vyvoj českého souvětí [The development of the subordinate clause in Czech]*. Prague: Ústav pro jazyk český Československé Akademie věd.

- Biberauer, Th. & I. Roberts. 2017. 'Conditional inversion and types of parametric change.' In: B. Los & P. de Haan (eds.), *Word Order Change in Acquisition and Language Contact: Essays in honour of Ans van Kemenade*. Amsterdam/Philadelphia: John Benjamins. 57-77.
- den Besten, H. 1986. 'Double Negation and the Genesis of Afrikaans.' In: P. Muysken & N. Smith (eds.), *Substrata versus Universals in Creole Genesis*. Amsterdam: Benjamins. 185-230.
- den Besten, H. 1989. *Studies in West Germanic Syntax*. Amsterdam/Atlanta, GA: Rodopi.
- Bjorkman, B. 2013. 'A syntactic answer to a pragmatic puzzle: The case of asymmetric *and*.' In: R. Folli, C. Sevdali & R. Truswell (eds.), *Syntax and its Limits*. Oxford: Oxford University Press. 391-408.
- Bodelot, C. 2013. 'La grammaticalisation de *si* en latin : de l'adverbe modal à la conjonction introduisant une subordonnée complétive?' In: C. Bodelot, H. Gruet-Skrabalova, F. Trouilleux (éds), *Morphologie, syntaxe et sémantique des subordonnants*, Clermont-Ferrand: Presses Universitaires Blaise Pascal. 365-379.
- Brown, P., B. Joseph & R. Wallace. 2009. 'Questions and answers.' In: P. Baldi & P. Cuzzolin (eds.), *New perspectives on historical Latin syntax, Volume 1 Syntax of the Sentence*. Berlin: de Gruyter. 489-530.
- Eckardt, R. 2006. *Meaning Change in Grammaticalization. An Enquiry into Semantic Reanalysis*. Oxford, Oxford University Press.
- Fagard, B. 2007. 'De puis à depuis: Préfixation et évolution sémantique.' In: B. Combettes & C. Marchello-Nizia (eds.), *Études sur le changement linguistique du français*, Nancy: Presses Universitaires de Nancy. 129-143.
- von Stechow, K. & S. Iatridou 2020. *Prolegomena to a theory of X-marking*. Ms. MIT.
- Haiman, J. 1978. 'Conditionals are Topics.' *Language* 54: 564-589.

- Hamblin, C. 1958. 'Questions' *Australasian Journal of Philosophy* 36: 159-168.
- Heine, B. U. Claudi & F. Hünemeyer. 1991. *Grammaticalization: a conceptual framework*. Chicago: University of Chicago Press.
- Hopper, P. & E. Traugott. 1993. *Grammaticalization*. Cambridge: Cambridge University Press.
- Iatridou, S. 1991. *Topics in conditionals*. Ph.D. thesis, MIT.
- Iatridou, S. & D. Embick. 1994. 'Conditional Inversion.' In: M. González (ed.), *Proceedings of NELS 24*. 189–203.
- Iatridou, S. & H. Zeijlstra. 2013. 'Negation, polarity and deontic modals'. *Linguistic Inquiry* 44: 529-568.
- Jacobs, N., E. Prince & J. van der Auwera. 1994. 'Yiddish.' In: E. Köning & J. van der Auwera (eds.), *The Germanic languages*. London: Routledge. 388–419.
- Jespersen, O. 1940. *A Modern English Grammar on Historical Principles. Part V: Syntax, Fourth Volume*. Copenhagen: Munksgaard.
- Kiparsky, P. 1995, 'Indoeuropean Origins of Germanic Syntax.' In: Battye, A. & I. Roberts (eds.), *Clause Structure and Language Change*. Oxford: Oxford University Press. 140–169.
- Koenenman, O. & H. Zeijlstra. 2017. *Introducing Syntax*. Cambridge: Cambridge University Press.
- Lightfoot, D. 2979. *Principles of Diachronic Syntax*. New York and London: Cambridge University Press.
- Pesetsky, D. 1989. *The Earliness Principle*. Ms. MIT.
- Postma, H. 2010. 'The impact of failed changes.' C. Lucas, S. Watts, A. Breitbarth & D. Willis, D (eds.), *Continuity and Change in Grammar*. Amsterdam: Benjamins. 269-302.
- Roberts, C. 1989. 'Modal Subordination and Pronominal Anaphora in Discourse.' *Linguistics and Philosophy* 12: 683–721.

- Roberts, I. & Roussou, A. 2003. *Syntactic Change. A Minimalist Approach to Grammaticalisation*. Cambridge: Cambridge University Press.
- Rodríguez-Molina, J. & A. Enrique-Arias. 2018). 'Si as a Q particle in Old Spanish.' In: M. Bouzouita, I. Sitaridou & E. Pato (eds.), *Studies in Historical Ibero-Romance Morpho-Syntax*. Amsterdam / Philadelphia: Benjamins. 249-274.
- Roelofsen, F. & D. Farkas. 2015. 'Polarity particle responses as a window onto the interpretation of questions and assertions.' *Language* 91: 359-414.
- Rosenkvist, H. 2004. *The Emergence of Conditional Subordinators in Swedish: A Study in Grammaticalization*. Lund: Department of Scandinavian Languages, Lund University.
- Starr, W. 2014. 'What 'If'?' *Philosophers' Imprint* 14: 1-27.
- Stone, M. 1999. 'Reference to Possible Worlds.' In *Tech. Rep. 49*, Rutgers University Center for Cognitive Science and Department of Computer Science.
- Stotz, P. 1996-2004. *Handbook on the Latin Language of the Middle Ages*. Volumes 1.-5. Munich: Beck.
- Svoboda, K. 1962. 'Review of Jaroslav Bauer: "Vy'voj českého souvětí".' *Slovo a slovesnost* 23: 211-218.
- Traugott, E. 1985. 'Conditional Markers.' In: Haiman, J. (ed.), *Iconicity in Syntax: Proceedings of a Symposium on Iconicity in Syntax, Stanford, June 24-26, 1983*. Amsterdam/Philadelphia: Benjamins. 289-307.
- Traugott, E. 2007. Semantic change. Oxford Research Encyclopedia of Linguistics.
- Van den Nest, D. 2010. 'Should conditionals be emergent ... : Asyndetic subordination in German and English as a challenge to grammaticalisation research.' In: A. van Linden, J.-C.

Verstraete & K. Davidse (eds.), *Formal evidence in grammaticalization research*.

Amsterdam: Benjamins. 93-136.

Vasmer, M. 1953-1958. *Russisches etymologisches Wörterbuch*. Vol. 1 (1953); Vol. 2 (1955), Vol.

(1958). Heidelberg: Winter.